



**RE: Stormwater Technical Team Call Highlights (Aug. 13th call)**

**Carl Stivers** to: Kristine Koch, Scheffler, Linda

08/16/2007 01:56 PM

"Andy Koulermos", "Amanda Shellenberger", "Amanda Spencer",  
Cc: "Christine Hawley", "Sanders, Dawn", "Gene Revelas", "Jim  
McKenna", "Jessica Pisano", "Scheffler, Linda", "Laura Jones",

Stormwater Technical Team -

I was hoping others could weigh in on this issue raised by the City and see where we stand. If we cannot resolve this additional change via email, it will have to wait until our next call on August 23rd, because that was our collective next available time to all meet to discuss anything.

I'd like to avoid waiting that long if possible, so any feed back you can give via email would be most appreciated. So far we have heard from Kristine.

My take on this issue is that we conducted phthalate stormwater sampling at 11 stations (more than the 2 stations for pesticides). I looked at the detect rates for phthalates in the Batch 1 stormwater data, and phthalate detection rates were generally above 50% at these stations with a few exceptions. Assuming that these are truly detections and not blank contamination, it seems like we would be filling more data gaps for pesticides than we would be creating for phthalates by making the changes that we agreed to at the conclusion of the last call.

Laura - Do you know whether we got a lot of stormwater field or lab blank contamination for phthalates? That would be a good way of checking whether the high level of phthalate stormwater detects are suspect.

Thanks.

Carl

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-----Original Message-----

From: Koch.Kristine@epamail.epa.gov [mailto:Koch.Kristine@epamail.epa.gov]  
Sent: Tuesday, August 14, 2007 2:52 PM  
To: Scheffler, Linda  
Cc: Andy Koulermos; Amanda Shellenberger; Amanda Spencer; Christine Hawley; Carl Stivers; Sanders, Dawn; Gene Revelas; Jim McKenna; Jessica Pisano; Scheffler, Linda; Laura Jones; LaFranchise, Nicole; Rick Applegate; Bob Wyatt; TARNOW Karen E  
Subject: RE: Stormwater Technical Team Call Highlights (Aug. 13th call)

All - here are my thoughts.

I think that it is more important to get the pesticide data rather than the phthalate data. Where any data for any parameter is insufficient, then it should be considered for additional data needs in the 8/23 meeting.

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Remedial Project Manager  
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To "Scheffler,  
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Subject  
Technical Team RE: Stormwater  
(Aug. 13th call) Call Highlights

Team,  
After we left our call, Dawn and I realized an  
additional consideration

that should have been discussed as part of the reprioritization between organochlorine pesticides and PAHs/phthalates. Pesticides and phthalates were the two analytical groups that were not slated for analysis in all stormwater composites because 1)pesticides were not likely to be detected in stormwater at concentrations that may be significant and 2)there was a high likelihood that phthalate results could be qualified by field or lab contamination of samples. We discussed relying more heavily on the sediment trap samples to evaluate these parameters.

With the proposed shifts, we may be sacrificing phthalate data for pesticides. Are we comfortable with the remaining data set for phthalates?

From: Carl Stivers [mailto:cstivers@anchorenv.com]  
Sent: Tuesday, August 14, 2007 11:37 AM  
To: Carl Stivers; Amanda Shellenberger; Amanda Spencer; Dawn Sanders; Jim McKenna; Scheffler, Linda; TARNOW Karen E; Andy Koulermos; Laura Jones; Koch.Kristine@epamail.epa.gov; LaFranchise, Nicole  
Cc: Jim McKenna; Jessica Pisano; Christine Hawley; Gene Revelas; Bob Wyatt; Rick Applegate  
Subject: Stormwater Technical Team Call Highlights (Aug. 13th call)

Stormwater Technical Team -

The Stormwater Technical Team (EPA/DEQ/LWG) discussed LWG's proposed approach for handling stormwater sediment trap samples yesterday. Here the meeting highlights and action items. As always, please let me know if I missed something. It was agreed that the next call would be on August 23 at 1 pm. The technical team agreed to the LWG proposed approach for sediment trap analyses including the following specific points:

- Reduce the mass of sample used for TOC analysis (from 1 gram to 0.1 grams), to provide more mass for chemical analyses
- Use catch basin sediments collected from select

locations for  
field and laboratory QA/QC analyses

In addition, the technical team agreed to the  
following changes in the

LWG proposed analysis prioritization approach:

Use sample mass proposed for PAH/phthalates  
analyses for

organochlorine analyses instead at stations  
WR-123 (Schnitzer

Slip), WR-14 (Chevron Transportation), WR-161  
(Portland Shipyard),

WR-147/148 (Gunderson)

Use sample mass proposed for PCB analyses for  
organochlorine

analyses instead at station OF-49 (City - St.  
Johns Area)

(Note that the LWG needs to obtain formal Exec.  
committee approval for  
these changes. We will notify the stormwater tech.  
team if LWG Exec.  
cannot approve these changes for some reason.)

It was also agreed that the next call would discuss  
the sample

completion information and whether it meets the  
original FSP objectives

and to what extent this indicates a need for  
additional fall sampling.

To prepare for this discussion, the LWG agreed to  
obtain sample

completion information on the T-4 stormwater stations  
from the Port and

on the GE site stormwater sampling from DEQ. In  
addition, the LWG

intends to summarize the percent detects for the  
Batch 2 and 3

stormwater composite data and, if possible in time,  
have this available  
for the next call as well.

It was also agreed that at the next call the group  
would start to talk  
about methods for calculating stormwater loads based  
on the program  
data.

Thanks.

Carl

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From: Carl Stivers  
Sent: Monday, August 13, 2007 8:50 AM  
To: Amanda Shellenberger; 'Amanda Spencer'; 'Dawn Sanders'; Jim McKenna; 'Scheffler, Linda'; 'TARNOW Karen E'; 'Andy Koulermos'; 'Laura Jones'; 'Koch.Kristine@epamail.epa.gov'; 'LaFranchise, Nicole'  
Subject: RE: Stormwater Sediment Trap Sample Handling and Analysis Methods

Stormwater Tech Team -

The text below was also supposed to be provided to you with the two excel tables that were sent around previously. Again, my apologies for not getting this to you sooner. I will go over the contents of the text at the start of the call at 9 am (in a few minutes).

The sediment trap samples are summarized on the spreadsheet titled "Stormwater Outfall Sed Trap Sample Mass Analytical Aliquots" prepared by the LWG. It includes wet weight, percent solids, dry weight, and a potential scheme for analysis for each sediment trap sample and the catch basin sediments. Since the sample mass was limited from the sediment trap stations, catch basin sediments at some locations were collected for potential use as laboratory quality control samples (e.g. matrix spike/matrix spike duplicate samples for organics and matrix spike/laboratory duplicate samples for metals and TOC, TSS) and field quality control samples (field duplicates). The approach detailed in

the sediment trap spreadsheet includes the use of the catch basin sediments as field and lab QC samples as an option for discussion with the Stormwater Technical Team.

Two relevant issues that developed during analysis are summarized below:

The two laboratories [CAS and Vista (formerly Alta)] that will be conducting the analyses were contacted to confirm receipt of upcoming samples and discuss the approach. Both laboratories indicated that to meet our low detection limits the minimum sample weights required for analysis for organic parameter groups were dry weight aliquots. This is not consistent with previous discussions with these labs or the information in the FSP and QAPP. The attached spreadsheet assumes the minimum sample masses for PCB congeners, organochlorine pesticides, PAHs/phthalates, metals, and herbicides in dry weight.

When conducting the total solid analysis, CAS did not use the minimum sample mass (1g) for most samples. CAS was notified about the limited sediment available from the sediment trap samples and was requested to use the minimum sample mass; however, the analyst who weighed the samples for the analysis consumed more than the minimum sample mass for most samples. The attached spreadsheet includes the actual weights used for total solids measurements.

Two separate schemes were developed in the Analytical Aliquot spreadsheet. The first scheme details sample aliquots for each individual sample as a stand-only sample (i.e., field replicate samples are considered to be a different sample than its parent sample) and the second scheme details sample aliquots where field replicate samples are combined with their parent samples as one stand-alone sample to help increase available sample mass for analysis. Combining the field replicates is currently our recommended approach in concert with

obtaining field and lab QC from catch basin sediment samples as noted above.

Both schemes were developed by calculating the dry weight from the percent solids measurements, subtracting out the actual wet weight mass used for the percent solids, TOC, and metals (if applicable) measurements, and calculating other aliquots for analysis. The aliquots were assigned in this spreadsheet based solely on the priority of analytes from the FSP. There are numerous options for each sample for distribution of sample mass for analysis. This spreadsheet was developed for use by the stormwater tech team for discussion purposes to determine the approach for each sample. Obviously, the approach could vary sample by sample by reducing the sample size one of the analysis and consuming the remaining sample for another parameter group (e.g. reduce sample mass extracted for PAHs/phthalates to provide sample mass for metals analysis (3.5 g for metals will result in 2X DL). Also, note that while organics are extracted on a dry weight basis as noted above, metals will be extracted on a wet weight basis. A minimum of 7g wet weight is necessary for this analysis to meet project MRLs. Sample aliquots in the table show wet/dry mass needed for metals analysis (based on a sample's total solids content); dry weights were used for ease of calculation to determine sample mass remaining for analysis. Also, a procedural recommendation is that all of the remaining analytical aliquots will be created at one time so we know the sample is well homogenized and any issues with discrepancies in the amount of total sample (although we expect such discrepancies will be small) can be resolved then before the samples are extracted.

The second spreadsheet titled "Stormwater Summary," details each sample's expected sediment detection limit factor; the level of detection will be elevated by the number presented in each cell based on limited sample volume. For example, a value of 1 means the target DL



will be met and a value of 2 means the actual achieved DL will be two times higher than the target DL. We have layered on top of this spreadsheet a color coding reflects the percentage of time each analyte group was detected at that station for the Batch 1 stormwater data. While Batch 1 results do not provide an indication of detection frequency for the entire stormwater data set and some stations were not sampled in Batch 1, it is the currently available data set with which we can start to understand the frequency of detections in stormwater. The summary table is intended to help determine where we have or are likely to have data from either sediment traps and/or stormwater samples. For example, the table shows where we have a complete absence of information (no detection limit factor for sediments and no coloring for stormwater), a limited amount of data (large detection limit factor sediments and light coloring for stormwater), and where we have an analyte group that is likely covered by both sampling methods (small detection limit factor for sediments and dark coloring for stormwater).

The Stormwater Technical Team asked for the LWG to propose a method for sediment trap sample handling. In summary, per the above discussion, we are proposing to recommend to EPA/DEQ members of the Stormwater Technical Team the following:

- Follow the priority order of analyses as previously agreed upon
- and detailed for each station in the EPA approved Stormwater FSP
- Combine field replicate samples into one samples available at some locations to achieve a higher sediment volume for analysis and to obtain data no more analyte groups at these locations
- Use catch basin sediments collected at the locations noted in the detailed spreadsheet for field and laboratory QC

PCBs appear to be the most important chemical from an in-river risk perspective. This approach will allow us to obtain PCB data for the

majority of sampling locations (sometimes at elevated DLs), which is likely to be supported by a substantial body of detected data in stormwater samples. The approach will also allow us to obtain PAH/Phthalate and Organochlorine pesticide data for those sites where these are the next highest priority analyte. (Note the sequence of the second/third priority analytes varies across the sample locations.) Across all sites, limited data will be obtained on third priority and higher analytes.

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From: Amanda Shellenberger  
Sent: Wednesday, July 25, 2007 3:45 PM  
To: 'Amanda Spencer'; 'Dawn Sanders'; 'Jim McKenna'; 'Scheffler, Linda'; 'TARNOW Karen E'; Carl Stivers; 'Andy Koulermos'; 'Laura Jones'; 'Koch.Kristine@epamail.epa.gov'; 'LaFranchise, Nicole'  
Subject: Stormwater Sediment Trap Sample Handling and Analysis Methods

Stormwater Tech Team -

Good News! The Stormwater Sediment Trap Sample Handling and Analysis Methods were APPROVED with no changes by the Exec. Committee today.

I've attached the two files for your review. Let's set up a conference call to discuss. Please email me with your potential availability. The best times for Carl and me are August 6th, 8th, or 9th anytime.

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